Amended Claims (April 11, 2005)

1. A patient-supporting device (5, 7), which includes a positioning device (1) for an X-ray detector (11) or an X-ray source (23) and a patient-supporting table (5), in which the positioning device (1) is supported under the patient-supporting table (5),

characterized in that the positioning device (1) includes an arched arm (15), in which either the X-ray detector (11) or the X-ray source (23) can be supported displaceably in the direction of the arch, and a base (9), in which the arched arm (15) is supported displaceably in the direction of the arch.

2. The patient-supporting device (5, 7) as defined by claim 1, wherein the arched arm (15) is supported displaceably in the direction of the arch in a second arched arm (13); and wherein the second arched arm (13) is supported displaceably in the direction of the arch in the base (9).

3. The patient-supporting device (5, 7) as defined by one of the foregoing claims, wherein the X-ray detector (11) or the X-ray source (23) can be supported movably in the arched arm (15) in the radial direction relative to the arch.

4. An X-ray machine (21), which has a patient-supporting device (5, 7) as defined by one of claims the

foregoing claims and an X-ray source (23), supported movably in all directions in space and located separately from the positioning device (1).

5. The X-ray machine (21) as defined by claim 4, which has a control unit (27), which is connected to the X-ray source (23) and the positioning device (1) and which is embodied so as to move the X-ray source (23) and the positioning device (1) in a manner adapted to one another, so that they assume a predetermined orientation to one another.

6. An X-ray machine (21), which has a patient-supporting device (5, 7) as defined by one of claims 1 through 3 and an X-ray detector (11), supported movably in all directions in space and located separately from the positioning device (1).

7. The X-ray machine (21) as defined by claim 6, which has a control unit (27), which is connected to the X-ray detector (11) and the positioning device (1) and which is embodied so as to move the X-ray detector (11) and the positioning device (1) in a manner adapted to one another, so that they assume a predetermined orientation to one another.